



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,039	12/19/2000	Anthony Mauro	990502	9961

23696 7590 07/15/2004

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

ABRISHAMKAR, KAVEH

ART UNIT	PAPER NUMBER
----------	--------------

2131

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,039

Applicant(s)

MAURO, ANTHONY

Examiner

Kaveh Abrishamkar

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the communication filed on December 19, 2000. Claims 1 – 5 were received for consideration. No preliminary amendments for the claims were received. Claims 1 – 5 are currently being considered.

Specification

2. The disclosure is objected to because of the following informalities: On line 26, "discreet" should be changed to "discrete."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Gersho et al. (U.S. Patent 6,233,550).

Regarding claim 1, Gersho discloses:

A method of controlling discontinuous transmissions, comprising the steps of:

determining a voice activity level in a digitized audio signal (Figure 4A item 18, column 10 lines 38 – 41, column 13 lines 17 – 53);

generating a control signal based on the level of voice activity detected (column 10 lines 38 – 41, column 13 lines 17 – 53);

generating active vocoder frames at a predetermined rate in a transmitter if said control signal indicates a first level of speech activity (Figure 4A item 52, column 10 lines 42 – 53, column 13 lines 17 – 53);

generating inactive vocoder frames if said control signal indicates a second level of speech activity (Figure 4A item 50, column 10 lines 42 – 53, column 13 lines 17 – 53); and

generating transition frames if said control signal indicates a transition from said first level to said second level, said transition frames comprising background noise information (Figure 4A item 54, column 10 lines 42 – 53, column 13 lines 17 – 53).

Regarding claim 4, Gersho discloses:

A discontinuous transmission controller, comprising:

a vocoder for generating active vocoder frames from said digitized audio signal at a predetermined output rate if speech is present, for generating inactive vocoder frames during periods of speech inactivity, and for generating transition frames during

transitions from speech activity to speech inactivity, said transition frames comprising background noise information (Figure 4A items 50, 52, 54, column 10 lines 38 – 53, column 13 lines 17 – 53).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gersho et al. (U.S. Patent 6,233,55) in view of Duke et al. (U.S. Patent 6,272,633).

Regarding claim 2, Gersho discloses:

A method for controlling discontinuous transmissions, comprising the steps of:
generating data frames at a receiver (Figure 4A items 50, 52, 54, column 10 lines 38 – 53, column 13 lines 17 – 53).

Gersho does not explicitly disclose encryption and decryption modules, which generate a codebook using a state vector when a data frame is in a queue. Duke discloses a system (Figure 2) with an encryption and decryption module for encrypting and decrypting digitized voice. The voice frames are placed in a buffer (queue) and are processed in turn by the encryption/decryption module (column 2 lines 28 – 48). In one

embodiment discussed by Duke, the voice frames are encrypted and later decrypted by codebook algorithms (column 2 lines 28 – 48). The state vector which is provided to the encryption/decryption modules is disabled when the buffer (queue) is an underflow condition. The disclosures of Gersho and Duke are analogous arts in the respect that both deal with voice communication over a network. Gersho provides the voice activity detection, frame generation, while Duke provides the encryption/decryption functions. Duke states, “many users have begun to utilize digital networks for voice communications” and that “confidentiality is a primary concern” (column 1 lines 25 – 31). It would have been obvious to one of ordinary skill in the art to use the encryption/decryption modules that Duke uses to secure voice communications in conjunction with the system of Gersho to provide confidentiality and security for the voice communications.

Claim 3 is rejected as applied above in rejecting claim 2. Gersho does not explicitly disclose determining that the queue of data frames ready for decryption is empty, disabling the state vector, and then enabling the state vector when a data frame is in the decryption queue, and then incrementing the state vector. Duke discloses a system (Figure 2) with an encryption and decryption module for encrypting and decrypting digitized voice. The voice frames are placed in a buffer (queue) and are processed in turn by the encryption/decryption module (column 2 lines 28 – 48). This encryption/decryption is enabled only when there are frames waiting in the queue. In one embodiment discussed by Duke, the voice frames are encrypted and later

decrypted by codebook algorithms (column 2 lines 28 – 48). The state vector which is provided to the encryption/decryption modules is disabled when the buffer (queue) is an underflow condition. The disclosures of Gersho and Duke are analogous arts in the respect that both deal with voice communication over a network. Gersho provides the voice activity detection, frame generation, while Duke provides the encryption/decryption functions. Duke states, “many users have begun to utilize digital networks for voice communications” and that “confidentiality is a primary concern” (column 1 lines 25 – 31). It would have been obvious to one of ordinary skill in the art to use the encryption/decryption modules that Duke uses to secure voice communications in conjunction with the system of Gersho to provide confidentiality and security for the voice communications.

Claim 5 is rejected as applied above in rejecting claim 4. Gersho does not explicitly disclose that a state vector is enabled when at least one data frame becomes available for encryption in a queue. Duke discloses a system (Figure 2) with an encryption and decryption module for encrypting and decrypting digitized voice. The voice frames are placed in a buffer (queue) and are processed in turn by the encryption/decryption module (column 2 lines 28 – 48). This encryption/decryption is enabled only when there are frames waiting in the queue. In one embodiment discussed by Duke, the voice frames are encrypted and later decrypted by codebook algorithms (column 2 lines 28 – 48). The state vector which is provided to the encryption/decryption modules is disabled when the buffer (queue) is an underflow condition. The disclosures of Gersho

and Duke are analogous arts in the respect that both deal with voice communication over a network. Gersho provides the voice activity detection, frame generation, while Duke provides the encryption/decryption functions. Duke states, "many users have begun to utilize digital networks for voice communications" and that "confidentiality is a primary concern" (column 1 lines 25 – 31). It would have been obvious to one of ordinary skill in the art to use the encryption/decryption modules that Duke uses to secure voice communications in conjunction with the system of Gersho to provide confidentiality and security for the voice communications.


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaveh Abrishamkar whose telephone number is 703-305-8892. The examiner can normally be reached on Monday thru Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

KA
07/07/04


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100